

REPORT
OF THE
HEALTH DEPARTMENT
OF
THE PANAMA CANAL

MONTH OF JUNE, 1917

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D. C. HOWARD

Surgeon, Medical Corps, United States Army
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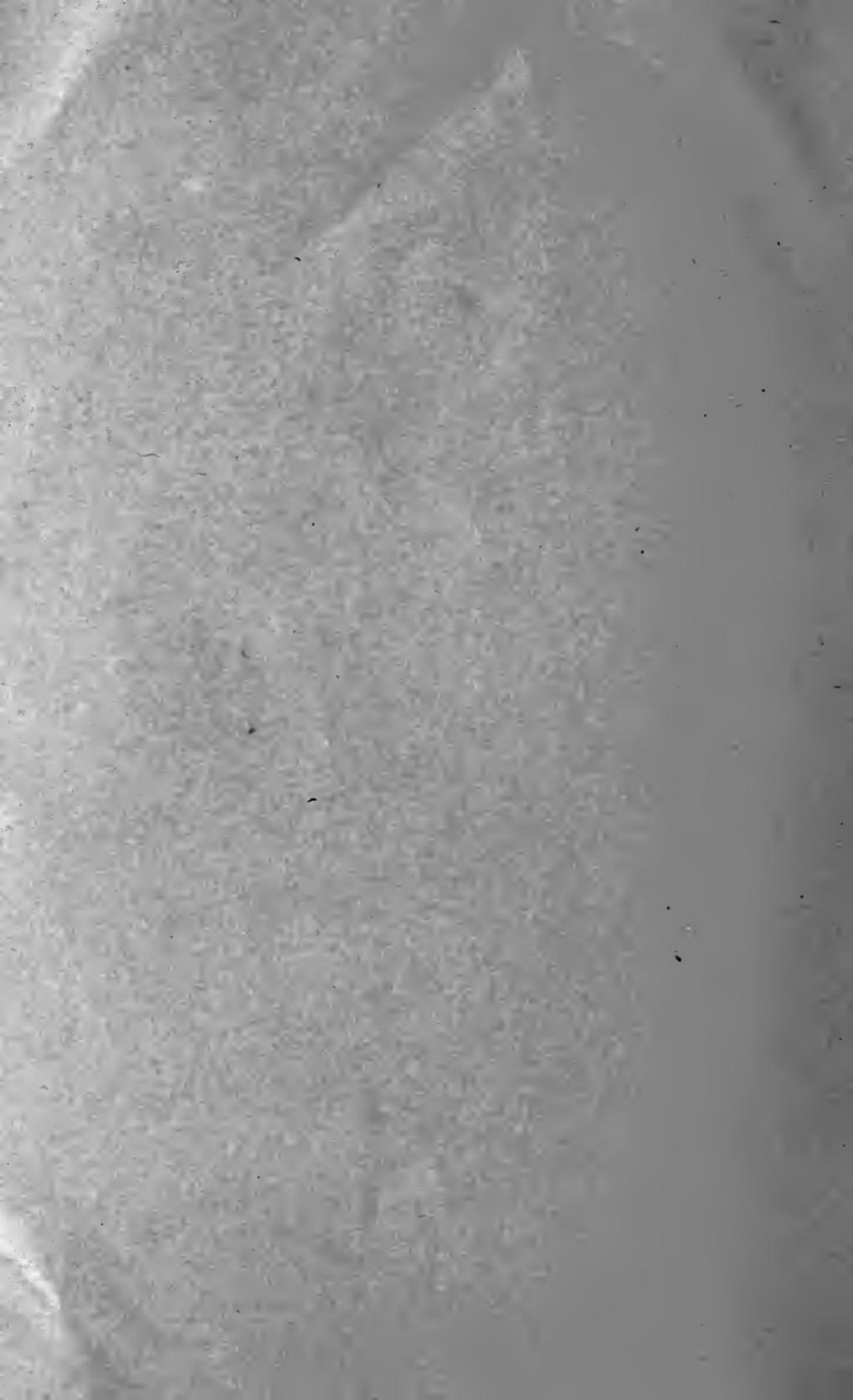
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D. C. HOWARD

**Lieutenant-Colonel, Medical Corps, United States Army
Chief Health Officer, Balboa Heights, Canal Zone**

**WASHINGTON
1917**



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LETTER OF TRANSMITTAL.

THE PANAMA CANAL,
HEALTH DEPARTMENT,
Balboa Heights, Canal Zone, July 10, 1917.

Col. CHESTER HARDING,
Governor of The Panama Canal,
Balboa Heights, Canal Zone.

SIR: I have the honor to submit the following report of the operations of the health department for the month of June, 1917.

Very respectfully,

D. C. HOWARD,
Chief Health Officer.

GENERAL REMARKS.

The health of employees and nonemployees in the Canal Zone and terminal cities has continued good.

No disease of a quarantinable nature originated on or was brought to the Isthmus during the month.

VITAL STATISTICS.

EMPLOYEES.

The following statistics are based upon the total number of names appearing on the pay rolls of The Panama Canal and the Panama Railroad Co. for the preceding month, which was 33,251.

Admissions to hospitals and quarters numbered 1,085,¹ a rate of 391.56, as compared with 381.64 for the preceding month and 287.99 for the corresponding month of last year.

Deaths from all causes numbered 16; of these, 14 were from disease, giving a rate of 5.08 due to disease alone, as compared with 6.01 for the preceding month and 3.61 for the corresponding period of last year.

The constantly noneffective rate was 9.62, as compared with 9.27 for the preceding month and 9.48 for the corresponding month of last year.

The admission rate for malaria, hospitals, and quarters, was 11.91, as compared with 9.90 for the preceding month and 23.61 for the

¹ All morbidity and mortality rates are computed as equivalent annual per 1,000.

corresponding month of last year. The constantly noneffective rate was 0.43, as compared with 0.25 for the preceding month and 0.70 for the corresponding month of last year.

Diseases causing the highest admission rates to hospitals, in the order of their numerical importance, were: (1) Venereal diseases, (2) malaria, (3) influenza, (4) diseases of the eyes and their annexa, and (5) lymphadenitis. These five diseases caused 29 per cent of all admissions to hospitals, venereal diseases alone causing 10 per cent and malaria 7 per cent of total admissions.

No employees were admitted from typhoid fever during the month, nor any for either the preceding month or the corresponding month of last year.

By race: For disease only, the admission rate to hospital and the death rate for white employees were 302.13 and 4.87, respectively, as compared with 357.56 and 2.54 for the preceding month and 261.97 and 0 for the corresponding month of last year. For black employees, for disease only, the admission rate to hospital and the death rate were 81.34 and 5.09, respectively, as compared with 94.12 and 6.57 for the preceding month and 83.07 and 7.55 for the corresponding month of last year.

The constantly noneffective rates were 19.08 for white and 7.97 for colored employees.

The admission rate to hospitals and quarters for malaria was 36.55 for white and 7.63 for colored employees, as compared with a rate of 30.43 for white and 6.57 for colored employees for the preceding month, and 54.15 for white and 16.88 for colored employees for the corresponding period of last year.

Three deaths occurred among American employees during the month, as compared with one for the preceding month and none for the corresponding month of last year.

Deportations: Two employees were deported during the month, both on account of disease.

CANAL ZONE.

The population of the Canal Zone (employees, nonemployees, and soldiers), according to the police census of June, 1916, is 31,048. From this population 25 deaths occurred during the month, 22 of which were from disease, giving a rate of 8.50, as compared with 8.89 for the preceding month and 8.12 for the corresponding month of last year.

Of the deaths from disease, 40 per cent occurred among children under five years of age, as compared with 39 per cent for last month.

Fifty-three births were reported during the month, giving a rate of 20.48. Of these births, 20 were white and 33 colored.

Eight deaths occurred among children under one year of age—one white and seven colored—giving an infant mortality rate, based on the number of births reported for the month, of 50 for white and 212 for colored children, with a general average of 151.

Of the total births reported, 8 per cent were stillbirths.

PANAMA CITY.

The population of the city, according to the census of December, 1915, is 60,778; this includes more than 10,000 employees of the Panama Canal. From this population 158 deaths occurred during the month, 152 of which were from disease, giving a rate of 30.01, as compared with 25.07 for the preceding month and 30.01 for the corresponding month of last year.

Of the total deaths from disease, 42 per cent occurred among children under five years of age, as compared with 45 per cent for last month.

The principal causes of death as compared with last month, were as follows:

	May.	June.
Tuberculosis (various organs).....	21	39
Diarrhea and enteritis.....	17	25
Pneumonia (including acute and broncho).....	26	21

Two hundred and thirty-two births were reported during the month, giving a rate of 45.81. Sixty-four deaths occurred among children under 1 year of age, giving an infant mortality rate, based on the number of births reported for the month, of 276.

Of the total births reported, 8 per cent were stillbirths.

COLON.

The population of Colon, according to the census of December, 1915, is 24,693, including over 5,000 employees of the Panama Canal. From this population, 63 deaths occurred during the month, all of which were from disease, giving a rate of 30.62, as compared with 22.84 for the preceding month, and 24.30 for the corresponding month of last year.

Of the deaths from disease, the percentage occurring among children under 5 years of age was 48, as compared with 30 for the preceding month.

The principal causes of death as compared with last month were as follows:

	May.	June.
Tuberculosis (various organs).....	8	15
Diarrhea and enteritis.....	3	11
Bronchitis (acute and chronic).....	1	8

Seventy-one births were reported, giving a rate of 34.51. Twenty-six deaths occurred among children under 1 year of age, giving an infant mortality rate, based on the number of births reported for the month, of 366.

Of the total births reported, 3 per cent were stillbirths.

DIVISION OF HOSPITALS.

ANCON HOSPITAL.

The average number of patients constantly in the hospital proper during the month was 477, as compared with 461 for the preceding month, and 431 for the corresponding month of last year. The average length of stay in hospital for each employee admitted was 16.50 days.

Statistical charts are shown under Tables VII, VIII, and XIII.

Corozal Hospital.—The average number of insane patients constantly cared for during the month was 351, as compared with 348 for the preceding month and 285 for the corresponding month of last year.

During June there were 13 admissions, 12 discharges, and 3 deaths. Of the discharges, one was a transfer to Ancon Hospital for surgical treatment.

Two patients were deported to the United States and one to Canada during the month.

Board of Health Laboratory.—An investigation of a skin disease among the cows at Corozal showed the same to be cattle mange. A sarcoptes was found in an early lesion. Most of the lesions had apparently been cured by the dipping to which the cattle were subjected to at frequent intervals, thus rendering the diagnosis difficult.

A peculiar body was found in the heart of a cow by Dr. Clark several months ago and was recorded in the May report as a trypanosome-like organism. These bodies have been demonstrated in large numbers in heart muscle by a special procedure and have been shown to be not a stage in the development of a trypanosome, but are probably cells from a sarcocyst which is found to be common in Panama cattle. This parasite seems deserving of further study since sarcocysts usually occur in voluntary muscle and not in the heart.

A verminous invasion of the kidney and ureter region in the hog is a common finding in this locality. A hog from Corozal showed in addition to these lesions a dissemination of the liver, lung, and spinal canal, causing paralysis and marked emaciation of the hind quarters.

Blood cultures from Panama cattle have shown a growth of a trypanosome which appears to be morphologically different from the trypanosome causing "murrina." The pathogenicity of this trypanosome, hitherto not known to occur in Panama, for laboratory animals and calves is being investigated.

See Table XIII for report of routine operations during the month.

Chronic ward.—The average number of chronic patients constantly cared for during the month was 22.33. During June there were two admissions and two discharges.

COLON HOSPITAL.

Forty-seven patients were constantly cared for in the hospital during the month, as compared with 45 for the preceding month, and 34 for the corresponding month of last year. The average length of stay in hospital for each employee admitted was 11.05 days.

The dry fill on hospital grounds has been completed, and concrete walks constructed for the new quarters for officers. The new morgue and garage buildings were completed during the month.

Statistical charts are shown under Tables VII, VIII, and XIV.

PALO SECO LEPER ASYLUM.

The number of patients constantly cared for during the month was 64.36, as compared with 65.24 for the preceding month, and 61.53 for the corresponding month of last year. During June one patient was admitted, with no deaths or discharges.

SANTO TOMAS HOSPITAL.

One thousand three hundred and twenty-seven patients were treated in the hospital during June, as compared with 1,452 for the preceding month, and 1,345 for the corresponding month of last year. The average daily number of patients constantly under treatment was 442, as compared with 459 for the preceding month, and 441 for the corresponding period of last year. The total number of days treatment was 13,285, as compared with 14,229 for last month.

One hundred and one deaths occurred at the institution during the month, with (1) tuberculosis, (2) diarrhea and enteritis, and (3) congenital debility the chief causes in the order named.

Statistical charts are shown under Table XV.

DIVISION OF SANITATION.

The following table shows the average weekly admission rate from malaria among employees to both hospitals and quarters, during the month of June, the percentages being based on the ratio of the number of admissions from each district to the total number of employees residing therein:

District.	Number of employees.	Number admissions from malaria during month.	Average weekly admission rate.
Balboa.....	2,632	1	.009
Ancon-Corozal.....	1,750	2	.027
Pedro Miguel.....	991	0	.....
Paraiso.....	1,750	0	.....
Culebra-Empire.....	451	0	.....
Gatun.....	1,424	3	.049
Cristobal.....	2,845	0	.....
Colon.....	5,094	1	.005
Panama City.....	10,049	1	.002
Miscellaneous ¹	6,265	25	.093

¹ Employees engaged in pasture and jungle clearing, and construction gangs outside of above sanitized districts.

CANAL ZONE.

Malarial admissions among employees are coming principally from construction and pasture gangs working well beyond our sanitized areas. An unusually large proportion of employees are thus exposed to malarial infection, due to construction activities. As an instance, 1,000 and odd laborers have been employed for the last six months or more in the construction of the new railroad from Toro Point to the mouth of the Chagres River; these laborers are living under conditions in which proper protection from mosquitoes can not be provided. The activities of the cattle and farm industries undertaken by the supply department have been unusually widespread during the month.

There were 33 admissions from malaria during the month from our 33,000 and odd employees; it will be noted that 25 of these cases came from construction, jungle clearing, and pasture gangs working at a distance from our sanitized towns. Within the areas under sanitary control there have been fewer cases of malaria than ever before in the history of the canal for the corresponding season.

PANAMA.

During the month there were reported 6 admissions to Ancon Hospital and 16 to Santo Tomas Hospital for malaria from the city of Panama, making a total of 22 cases. No deaths occurred from this disease.

During the month 200 vaccinations were performed in the village of Pueblo Nuevo. The virus was especially good; only one case was observed in which there was no "take." The vaccine used was produced in the board of health laboratory, Ancon. The district covered included the village proper, and the houses bordering the road from village to tramway terminal, Savannas Road.

During the month, in accordance with instructions from the chief health officer, a census of the city was undertaken, which it is expected to finish during the coming month.

The census of Pueblo Nuevo in the Savannas was concluded, and it is noted that there are now a total of 740 persons living in that village. No census was taken of this place in December, 1915, at the time of last taking of the city, but it is estimated that there were then about 200 persons living in that vicinity. This indicates a very disproportionate growth of this section as compared with the city districts.

The nurse in charge of infant welfare work reports for the month of June as follows:

Station work:

Total number of babies seen.....	268
Instructions given to mothers, total cases.....	157
Treatments given babies, total cases.....	50
Histories taken.....	37
Examinations made.....	353

Outside work:

Total number of visits made.....	1,178
Number of cases not located.....	31
Number moved to Colon and interior.....	39
Number of breast-fed babies.....	181
Number of bottle-fed babies.....	12
Number of breast and bottle fed babies.....	73
Total number of babies seen.....	1,446
Number of destitute cases given assistance (by Red Cross).....	5
Number of cases admitted to hospital.....	6
Number of cases treated at Santo Tomas Dispensary.....	11
Number of cases treated by physician at station.....	43
Defective conditions found:	
Skin disease (rash).....	10
Whooping cough.....	2
Deaths among infants.....	8

COLON.

Only one case of malaria among employees was chargeable to this district for the month of June, as compared with 16 cases for the month of June last year and 44 cases for June, 1915.

Nine cases of tuberculosis were reported, as compared with 14 for last month.

Satisfactory progress in antimalarial measures is reported for our force at work in Emiliani's pastures, east of Mount Hope district. This work, which consists mainly in drainage, will be completed during next month.

An arrangement has been effected whereby the supply department is to institute drainage in several of our outlying districts, notably Marquardt's (south of Mindi Division Bridge and along both sides of Gatun Road), and put in some additional drainage in Emiliani's. These areas have always been endemic foci of malaria and this drainage will prove of unbounded benefit to the district.

There have been no diseases of epidemic proportions reported during the month; neither have school operations been interfered with.

Only one fine was imposed for infraction of the sanitary code.

QUARANTINE DIVISION.

The routine work of the quarantine division has been carried on without special incident during the month.

Inspection of food animals for the month of June was as follows:

Quarantine inspections:

Cattle.....	934
Swine.....	702

Ante and post mortem inspections:

Cattle.....	1,509
Swine.....	2

No cases of anthrax occurred during the month.

TABLE I.—ADMISSIONS, DEATHS, AND NONEFFECTIVE RATES FOR EMPLOYEES.

ABSOLUTE NUMBERS.

	Number of employees.	Admissions to hospitals.			Deaths.			Noneffective from sickness.		
		Total.	Disease.	External causes.	Total.	Disease.	External causes.	Days treated.	Constantly noneffective.	
June, 1917:										
White.....	4,925	144	124	20	3	2	1	2,820	94.01	
Colored.....	28,326	259	192	67	13	12	1	6,775	225.83	
Total.....	33,251	403	316	87	16	14	2	9,595	319.84	
May, 1917:										
White.....	4,732	157	141	16	1	1	0	3,037	97.97	
Colored.....	29,195	308	229	79	18	16	2	6,715	216.61	
Total.....	33,927	465	370	95	19	17	2	9,752	314.58	
June, 1916:										
White.....	4,489	117	98	19	0	0	0	2,575	85.82	
Colored.....	27,012	258	187	71	20	17	3	6,380	212.66	
Total.....	31,501	375	285	90	20	17	3	8,955	298.48	

PROPORTIONATE NUMBERS.¹

June, 1917:										
White.....	4,925	350.86	302.13	48.73	7.31	4.87	2.44	.....	19.08
Colored.....	28,326	109.72	81.34	28.38	5.51	5.09	.42	.....	7.97
Total.....	33,251	145.44	114.04	31.40	5.77	5.08	.72	.....	9.62
May, 1917:										
White.....	4,732	398.14	357.56	40.57	2.54	2.54	.....	.....	20.70
Colored.....	29,195	126.59	94.12	32.47	7.39	6.57	.82	.....	7.42
Total.....	33,927	164.47	130.87	33.60	6.72	6.01	.71	.....	9.27
June, 1916:										
White.....	4,489	312.76	261.97	50.79	.....	.....	.....	.....	19.12
Colored.....	27,012	114.61	83.07	31.54	8.88	7.55	1.33	.....	7.87
Total.....	31,501	142.81	108.54	34.27	7.62	6.48	1.14	9.48	

¹ Annual average per 1,000 employees.

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TABLE I-A.—DEATHS OF RESIDENTS OF THE CITIES OF PANAMA,
COLON, AND THE CANAL ZONE.

Place.	Population.	Deaths.			Annual average per 1,000.		
		Total.	Disease.	External causes.	Total.	Disease.	External causes.
June, 1917:							
Panama.....	60,778	158	152	6	31.20	30.01	1.18
Colon.....	24,693	63	63	0	30.62	30.62	.....
Canal Zone.....	31,048	25	22	3	9.66	8.50	1.16
Total.....	116,519	246	237	9	25.33	24.41	.92
May, 1917:							
Panama.....	60,778	131	127	4	25.86	25.07	.79
Colon.....	24,693	48	47	1	23.33	22.84	.49
Canal Zone.....	31,048	26	23	3	10.05	8.89	1.16
Total.....	116,519	205	197	8	21.11	20.29	.82
June, 1916:							
Panama.....	60,778	154	152	2	30.40	30.01	.39
Colon.....	24,693	52	50	2	25.27	24.30	.97
Canal Zone.....	31,048	27	21	6	10.44	8.12	2.32
Total.....	116,519	233	223	10	24.00	22.97	1.03

TABLE II.—CAUSES OF DEATHS OF INFANTS BY

Cause of death.	Sex.		Color.		(-) 1 week.	(+) 1 week. (-) 1 month.
	M.	F.	W.	B.		
Whooping cough.....	1	—	—	1	—	—
Beriberi.....	2	—	—	2	—	—
Hereditary syphilis.....	1	—	—	1	—	1
Epilepsy.....	—	1	—	1	—	—
Acute bronchitis.....	—	1	—	1	—	—
Chronic bronchitis.....	4	4	—	8	—	—
Broncho-pneumonia.....	8	4	2	10	—	1
Pneumonia (unqualified).....	1	1	1	1	—	—
Lobar pneumonia.....	—	1	—	1	—	—
Acute indigestion.....	1	—	—	1	—	—
Gastro enteritis.....	18	13	3	28	—	—
Colitis.....	2	11	—	13	—	1
Congenital malformations.....	—	1	—	1	—	1
Congenital debility, icterus and sclerema.....	—	2	—	2	1	1
Premature birth.....	2	6	—	8	7	1
Congenital debility.....	2	—	1	1	—	—
Malnutrition.....	4	4	—	8	1	—
Other causes peculiar to early infancy.....	2	1	1	2	3	—
Total.....	48	50	8	90	15	4
Stillbirths.....	13	13	—	26	—	—
Grand total.....	61	63	8	116	15	4
Infant mortality rate, based on number of births reported for month (death rate per 1,000 live births)	—	—	—	—	—	—
Percentage of deaths under 1 year of age to total deaths for month.....	—	—	—	—	—	—

SEX, COLOR, AGE, AND PLACE OF RESIDENCE.

Age by months.												Place of residence.			
1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	Panama.	Colon.	Zone.	Total.	
				1						1	1	1	1	1	
											1	1	1	2	
										1				1	
											1			1	
1	1	2									1	6	1	8	
2	1	3									7	4	1	12	
											2			2	
										1	1			1	
2	1	3	3	4	4	3	1	5	3	2	21	10		31	
1	1	1	1	1	2	2	3	1	2	2	12	1		13	
											1			1	
											1	1		2	
1											7			8	
											1	2	1	2	
											2	1		3	
7	5	10	5	9	6	9	6	7	8	7	64	26	8	98	
											19	2	5	26	
7	5	10	5	9	6	9	6	7	8	7	83	28	13	124	
1,000 births)											275.86	366.20	150.94	275.28	
											41	41	32	40	

TABLE III.—DEATHS, BY NATIONALITY.

	Employees.		Nonemployees.		Total.		Grand total.
	Male.	Female.	Male.	Female.	Male.	Female.	
St. Kitts.....				1		1	1
Antigua.....		2		3	2	3	5
Barbados.....	6		26	17	32	17	49
China.....		4		1	4	1	5
Colombia.....		5		6	5	6	11
Costa Rica.....		1			1		1
Cuba.....		1			1		1
Demerara.....		3			3		3
England.....		1			1		1
Greece.....		1			1		1
Grenada.....		1		3	1	3	4
Hayti.....	1				1		1
Italy.....		3			3		3
Jamaica.....	4		32	33	36	33	69
Martinique.....		2		1	2	1	3
Montserrat.....				1		1	1
Nassau.....				1		1	1
Panama.....	2		26	38	28	38	66
Peru.....		1			1		1
St. Lucia.....		2		3	2	3	5
Spain.....		1			1		1
Trinidad.....		3		1	3	1	4
United States.....	2	1	4		6	1	7
Venezuela.....			2		2		2
Total.....	15	1	121	109	136	110	246

TABLE IV.—DEATH RATES AMONG AMERICANS ON THE Isthmus CONNECTED WITH THE PANAMA CANAL.

	Annual average per 1,000.
White employees from the United States:	
Disease.....	5.71
External causes.....	2.86
Total.....	8.57
White women and children from the United States:	
Disease.....	2.48
External causes.....	.....
Total.....	2.48
White employees and their families from the United States:	
Disease.....	3.90
External causes.....	1.30
Total.....	5.20
Total Americans on the Canal Zone, including military, connected with the Panama Canal:	
Disease.....	2.10
External causes.....	.70
Total.....	2.80

TABLE V.—CAUSES OF DEATHS OF EMPLOYEES.

	White.	Colored.	Total.
Disease:			
Toxemia following thyroidectomy.....	1	.....	1
Secondary anemia.....	1	.....	1
Tuberculosis of the lungs.....	.....	4	4
Disseminated tuberculosis.....	.....	1	1
Cerebral hemorrhage.....	.....	1	1
Rupture, abdominal aneurysm.....	.....	1	1
Carcinoma of stomach.....	.....	1	1
Strangulated hernia.....	.....	1	1
Septicemia caused by burns.....	.....	1	1
Chronic nephritis.....	.....	1	1
Lobar pneumonia.....	.....	1	1
External causes:			
Traumatism by firearms.....	1	.....	1
Accidental drowning.....	.....	1	1
Total.....	3	13	16

TABLE VI.—CAUSES OF DEATHS OF CIVIL POPULATION (EMPLOYEES
PLACE OF

Cause of death.	Sex.		Color.			Age (in years).		
	M.	F.	W.	B.	Y.	-1 year.	1-4	5-10
<i>General diseases.</i>								
Whooping cough.....	1	1			2			
Dysentery.....		1			1			
Purulent infection and septicemia.....	1				1			
Pellagra.....		2			2			
Beriberi.....	2				2			
Tuberculosis of the lungs.....	25	15	5	34	1		3	1
Acute miliary tuberculosis.....	1				1			1
Tuberculous meningitis.....	1			1				
Abdominal tuberculosis.....	1				1			
Tuberculosis of bones and joints.....	1	1			2			2
Tuberculosis of the genital-urinary organs.....	1				1			1
Disseminated tuberculosis.....	1	2			3			
Syphilis, tertiary.....	1	2			3			
Syphilis, hereditary.....	1				1			1
Cancer and other malignant tumors of the buccal cavity.....	1		1					
Cancer and other malignant tumors of the stomach and liver.....	1	1			2			
Cancer and other malignant tumors of the female genital organs.....	2				2			
Cancer and other malignant tumors of the breast.....		1			1			
Anemia, secondary, cause not determined.....	1		1					
Alcoholism, acute.....	1				1			
<i>Diseases of the nervous system and of the organs of special sense.</i>								
Cerebral hemorrhage, apoplexy.....	4	2			6			
General paralysis of the insane.....	2		1		1			
Epilepsy.....		2			2			1
<i>Diseases of the circulatory system.</i>								
Acute endocarditis.....	2				2			
Organic diseases of the heart.....	7	3	2		8			
Aneurysm.....	2				2			
Hemorrhage; other diseases of the circulatory system.....		1			1			
<i>Diseases of the respiratory system.</i>								
Diseases of the thyroid body.....		1	1					
Acute bronchitis.....	2	2	1	3			1	2
Chronic bronchitis.....	4	5			9		8	
Broncho-pneumonia.....	9	8	3	14			12	4
Pneumonia (unqualified).....	2	2	2	2			2	1
Lobar pneumonia.....	5	1			6			1
Abscess of lungs.....	1				1			

AND NONEMPLOYEES) AND MILITARY, BY SEX, COLOR, AGE, AND RESIDENCE.

TABLE VI.—CAUSES OF DEATHS OF CIVIL POPULATION (EMPLOYEES
PLACE OF

Cause of death.	Sex.		Color.			Age (in years).		
	M.	F.	W.	B.	Y.	-1 year.	1-4	5-10
<i>Diseases of the digestive system.</i>								
Diseases of the teeth and gums.....			1	.....	1			
Acute indigestion.....	1	.....		1			1	
Diarrhea and enteritis (under 2 years).....	21	15	3	33			31	5
Colitis (under 2 years).....	3	14	.....	17			13	4
Colitis (over 2 years).....	1	1	.....	1	1			
Other hernias.....	1	.....		1				
Intestinal obstruction.....			1	.....	1			
Cirrhosis of the liver.....			1	.....	1			
Other diseases of the liver.....	1	.....		1				
Abscess of liver (unqualified).....	1	.....		1				
<i>Nonvenereal diseases of the genito-urinary system and annexa.</i>								
Acute nephritis.....	1	.....		1				
Bright's disease (chronic nephritis).....	4	5	2	7				
Other diseases of the kidney and annexa.....		1	.....	1				
Uterine hemorrhage (nonpuerperal).....		1	.....	1				
<i>Malformations.</i>								
Congenital malformations (stillbirth not included).....			1	.....	1		1	
<i>Diseases of early infancy.</i>								
Congenital debility, icterus and sclerema.....			2	.....	2		2	
Premature birth.....	2	6	.....	8			8	
Congenital debility.....	2	.....	1	1			2	
Malnutrition.....	5	4	.....	9			8	1
Other causes peculiar to early infancy.....	2	1	1	2			3	
<i>Affections produced by external causes.</i>								
Suicide by hanging or strangulation.....	1	.....		1	1			
Suicide by firearms.....		1	.....	1				
Burns (conflagration excepted).....	1	.....		1				
Accidental drowning.....	2	.....		2				
Traumatism by firearms.....	1	.....	1	.....			
Traumatism by fall.....	1	.....			1			
Traumatism by other crushings.....	1	.....		1				
Other external violence.....	1	.....		1				
Cause of death not specified or ill defined	2	.....		2			1	
Total.....	136	110	26	216	4	98	25	3
Stillbirths.....	13	13	0	26				
Grand total.....	149	123	26	242	4	98	25	3

AND NONEMPLOYEES) AND MILITARY, BY SEX, COLOR, AGE, AND RESIDENCE—Continued.

TABLE VI-A.—DEATHS OF NONRESIDENTS.

Residence.	Nationality.	Color.	Sex.	Age.	Cause of death.
Interior of Panama.	Colombia.....	Black....	Male....	57	Cardio renal insufficiency.
Do.....	Panama.....	do.....	Female....	15	Colitis.
Do.....	do.....	do.....	Male....	23	Lobar pneumonia.
Do.....	do.....	do.....	do....	50	Myocardiac insufficiency.
Do.....	Barbados.....	do.....	do....	40	Abscess of liver.
Do.....	Jamaica.....	do.....	do....	42	Lightning.
Do.....	Colombia.....	do.....	do....	66	Miliary tuberculosis.
S. S. Quilque.....	Chile.....	White....	do....	28	Tuberculous peritonitis.
Interior of Panama.	Panama.....	Black....	Female....	26	Anemia. Uncinariasis.
Do.....	do.....	do.....	do....	21	Fever, undetermined.

¹ Months.

NOTE.—Deaths of nonresidents are not included in the statistical charts relating to the Canal Zone or the cities of Panama and Colon.

TABLE VII.—DISCHARGES AND DEATHS IN THE

Diseases.	Employees.											
	Discharges.								Deaths.			
	White.				Black.				White.			
	Americans.		Europeans.		Americans.		Europeans.		Americans.		Europeans.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<i>General diseases.</i>												
Typhoid fever.....									1			
Malarial fever:												
Estivo-autumnal.....	2		4		13							
Tertian.....	1		4		3							
Undetermined.....			1									
Measles.....												
Whooping cough.....												
Influenza.....	11	2	4		9							
Dysentery.....												
Erysipelas.....												
Chicken pox.....							2					
Mumps.....							1					
Purulent infection and septicemia.....							1					
Septicemia.....							1					
Pellagra.....												
Beriberi.....												
Tuberculosis of the lungs.....	1		2		1							3
Acute miliary tuberculosis.....												
Tuberculous meningitis.....												
Pott's disease.....												
Tuberculosis of the lymph glands.....												
Tuberculosis of the genitourinary organs.....							2					1
Disseminated tuberculosis.....												
Syphilis, secondary.....							1					
Syphilis, tertiary.....	1						21					
Syphilis, period not stated.....												
Gonorrhea.....	4		1				7					
Gonorrhreal arthritis.....							4					
Gonorrhreal orchitis and epididymitis.....								1				
Soft chancre.....								6				
Adenitis chancroidal.....								1				
Cancer and other malignant tumors of the stomach and liver.....								1				1
Cancer and other malignant tumors of other organs and of organs not specified.....								1				
Other tumors (tumors of the female genital organs excepted).....												
Acute articular rheumatism.....	1											
Diabetes.....	1											
Anemia secondary, cause not determined.....							2		1			

HOSPITALS OF THE PANAMA CANAL.

TABLE VII.—DISCHARGES AND DEATHS IN THE

Diseases.	Employees.											
	Discharges.						Deaths.					
	White.						White.					
	Americans.		Europeans.		Black.		Americans.		Europeans.		Black.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<i>General diseases—Continued.</i>												
Other general diseases.....	2											
Purpura hemorrhagica.....	1											
Alcoholism acute.....												
Alcoholic psychosis.....												
Other chronic poisoning.....												
<i>Diseases of the nervous system and of the organs of special sense.</i>												
Cerebral hemorrhage, apoplexy.....							1					
Softening of the brain.....												1
Paralysis without specified cause.....								1				
General paralysis of the insane.....												
Other forms of mental alienation.....								1				
Epilepsy.....												
Convulsions (nonpuerperal) [5 years and over].....												
Convulsions of infants [under 5 years of age].....												
Hysteria.....												
Neuritis.....	3		1		2		1					
Other diseases of the nervous system.....	1											
Neurasthenia.....	2											
Diseases of the eyes and their annexa.....	2						9					
Diseases of the ears.....												
<i>Diseases of the circulatory system.</i>												
Organic diseases of the heart.....	1							2				
Inc. Aneurysm.....												
Inc. Arterio-sclerosis.....												
Hemorrhoids.....												
Varices.....												
Varicocele.....	1							2				
Diseases of the lymphatic system (lymphangitis, etc.).....	1							1				
Lymphadenitis (nonvenereal).....								6				
<i>Diseases of the respiratory system.</i>												
Diseases of the nasal fossae.....	2	1										
Adenoid vegetations.....												
Diseases of the larynx.....	1											
Diseases of the thyroid body.....									1			

HOSPITALS OF THE PANAMA CANAL—Continued.

TABLE VII.—DISCHARGES AND DEATHS IN THE

HOSPITALS OF THE PANAMA CANAL—Continued.

TABLE VII.—DISCHARGES AND DEATHS IN THE

HOSPITALS OF THE PANAMA CANAL—Continued.

TABLE VII.—DISCHARGES AND DEATHS IN THE

Diseases.	Employees.											
	Discharges.						Deaths.					
	White.		Black.		White.		Black.		White.		Black.	
	Americans.	Europeans.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<i>Diseases of the bones and of the organs of locomotion.</i>												
Diseases of the bones (tuberculosis excepted)	1	1				4						
Periostitis												
Diseases of the joints (tuberculosis and rheumatism excepted)												
Ankylosis												
Arthritis												
Synovitis	1											
Amputations												
Other diseases of the organs of locomotion	1					1	2					
<i>Malformations.</i>												
Congenital malformations (still-birth not included)						2						
<i>Diseases of early infancy.</i>												
Newborn child												
Congenital debility, icterus, and sclerema												
Premature birth												
Malnutrition												
<i>Affections produced by external causes.</i>												
Poisoning by food	1	2				1						
Other acute poisonings		1										
Burns (conflagration excepted)	1					4						
Traumatism by firearms									1			
Traumatism by cutting or piercing instruments							8					
Traumatism by fall							5					
Traumatism by machines							1					
Traumatism by other crushings (vehicles, railroads, landslides, etc.)						1						
Railroad traumatism							4					
Dynamite traumatism							2					
Injuries by animals	1						1					
							3					

HOSPITALS OF THE PANAMA CANAL—Continued.

Nonemployees.										Nonresidents.									
Discharges.					Deaths.					Discharges.					Deaths.				
White.				Black.	White.				Black.	White.				Black.	White.				Black.
A.	Soldiers.	P. R.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
5			2	1															13 1
1																			1
1																			1
2			1																4 1
1																			
4			1																10
4			1																9
			10	10	3	3													26
							1												1
								1											2
3			1																8
1																			2
			1																7
			2																3 1
2			1		1	2			1										14 6 1
							1				1								6 3 1 4

TABLE VII.—DISCHARGES AND DEATHS IN THE

Diseases.	Employees.											
	Discharges.								Deaths.			
	White.				Black.				White.			
	Americans.	Europeans.	Americans.	Europeans.	M.	F.	M.	F.	M.	F.	M.	Europeans.
												Black.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<i>Affections produced by external causes—Continued.</i>												
Electricity (lightning excepted).							1					
Fractures (cause not specified).	4		1				3	1				
Dislocations.							1					
Sprains.												
Other external violence.	3		3				31					
<i>Ill-defined diseases.</i>												
Infections of undetermined origin.	2						4					
No disease.	1	1					2					
Feigned disease.												
Total.....	97	14	33		238	5	2	1			8	

HOSPITALS OF THE PANAMA CANAL—Continued.

Nonemployees.												Nonresidents.												
Discharges.						Deaths.						Discharges.						Deaths.						
White.				Black.				White.				Black.				White.				Black.				
A:	Soldiers.	P. R.	M.	F.	M.	F.	M.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
6					2																		1	
1					1																		17	
1																							3	
5			2		4																		1	
																							48	
1						3																	12	
6						4																	25	
			1																				1	
253	19	40	122	54	113			3		8	11	21	2										1,011	33

Total discharges.

Total deaths.

TABLE VIII.—CONSOLIDATED HOSPITAL REPORT.

[A=White Americans; F=White foreign; B=Blacks.]

	Remaining June 1.			Admitted.			Died.			Dis- charged.		
	A.	F.	B.	A.	F.	B.	A.	F.	B.	A.	F.	B.
ANCON HOSPITAL.												
Panama Canal employees.....	19	20	125	84	15	171	3	...	5	83	19	168
Panama Railroad employees.....	6	6	49	4	4	35	...	...	3	6	5	37
Soldiers.....	71	...	289	...	...	...	...	...	267	...	...	...
Panama pay cases.....	...	...	...	...	...	1	...	...	...	...	...	...
Other pay cases.....	30	29	63	94	42	138	...	...	10	97	32	123
Charity cases.....	3	2	25	16	6	37	1	1	6	12	2	26
Total.....	129	57	262	487	67	382	4	1	24	465	58	354
COROZAL HOSPITAL (INSANE).												
Panama Canal employees.....	...	...	7	...	...	...	1	...	...	...	...	1
Panama Railroad employees.....	...	...	1	...	...	...	...	...	...	...	...	...
Soldiers.....	2	...	...	3	...	...	...	...	2	...	...	...
Panama pay cases.....	4	46	203	...	1	3	...	1	2	...	...	2
Other pay cases.....	1	6	1	...	...	2	...	...	...	1	3	1
Charity cases.....	3	10	68	...	...	3	...	...	...	1	3	1
Total.....	10	62	280	3	1	9	...	1	2	3	3	4
Grand total.....	139	119	542	490	68	391	4	2	26	468	61	358
COROZAL FARM (CRIPPLES).												
Panama Canal employees.....	...	...	9	53	...	...	3	...	...	...	...	1
CHRONIC WARD.												
Charity cases.....	...	...	23	...	...	2	...	...	...	...	...	1
COLON HOSPITAL.												
Panama Canal employees.....	1	2	7	19	3	27	...	...	...	13	4	22
Panama Railroad employees.....	1	3	6	10	5	25	...	...	...	9	5	15
Soldiers.....	4	...	...	9	...	...	...	...	5	...	...	...
Panama pay cases.....	...	...	2	...	3	7	...	...	1	...	1	2
Other pay cases.....	9	2	...	20	9	11	...	...	20	6	5	...
Charity cases.....	2	...	...	8	...	3	...	...	7	...	2	...
Total.....	17	7	15	66	20	73	...	...	1	54	16	46
PALO SECO LEPER ASYLUM.												
Panama pay cases.....	...	...	1	36	...	1	...	...	...	...	...	...
Charity cases.....	...	...	1	26	...	...	...	...	...	...	...	...
Total.....	...	...	2	62	...	1	...	...	...	...	...	...
GRAND TOTALS.												
Panama Canal employees.....	20	31	192	103	18	202	3	...	5	96	23	192
Panama Railroad employees.....	7	9	56	14	9	60	...	...	3	15	10	52
Soldiers.....	77	...	...	301	...	...	...	...	274	...	...	...
Panama pay cases.....	4	47	241	...	5	11	...	1	3	...	1	4
Other pay cases.....	40	37	64	114	51	151	...	...	10	117	38	128
Charity cases.....	8	13	142	24	6	45	1	1	6	20	5	30
Total.....	156	137	695	556	89	469	4	2	27	522	77	406

TABLE VIII.—CONSOLIDATED HOSPITAL REPORT—Continued.

	Transferred.			Remaining June 30.			Average number constantly sick.			
	A.	F.	B.	A.	F.	B.	A.	F.	B.	Total.
ANCON HOSPITAL.										
Panama Canal employees.....			2	17	16	121	23.26	15.60	116.70	155.56
Panama Railroad employees.....			1	4	5	43	6.90	4.23	47.37	58.50
Soldiers.....	2			91			99.77			99.77
Panama pay cases.....						1			.40	.40
Other pay cases.....	1		2	26	39	66	28.33	32.77	67.77	128.87
Charity cases.....			4	6	5	26	4.33	3.17	26.83	34.33
Total.....	3	9	144	65	257	162.59	55.77	259.07	477.43	
COROZAL HOSPITAL (INSANE).										
Panama Canal employees.....						7			6.47	6.47
Panama Railroad employees.....						1			1.00	1.00
Soldiers.....			3				2.17			2.17
Panama pay cases.....			1	4	46	201	4.00	45.93	201.80	251.73
Other pay cases.....			1		1	5	1.00	5.37	2.23	8.60
Charity cases.....				2	7	70	2.87	9.50	68.37	80.74
Total.....	1	1	10	58	282	10.04	60.80	279.87	350.71	
Grand total.....	3	1	10	154	123	539	172.63	116.57	538.94	828.14
COROZAL FARM (CRIPPLES).										
Panama Canal employees.....					9	55			9.00	53.63
CHRONIC WARD.										
Charity cases.....			1			23			22.33	22.33
COLON HOSPITAL.										
Panama Canal employees.....	1	1	4	6		8	5.36	1.16	10.14	16.66
Panama Railroad employees.....	1	2	3	1	1	13	1.90	1.16	8.60	11.66
Soldiers.....	3			5			4.60			4.60
Panama pay cases.....		1	6		1			.13	.33	.46
Other pay cases.....	4		1	5	5	5	6.63	2.36	1.97	10.96
Charity cases.....			1	3			2.26		.44	2.70
Total.....	9	4	15	20	7	26	20.75	4.81	21.48	47.04
PALO SECO LEPER ASYLUM.										
Panama pay cases.....					2	36			1.36	36.00
Charity cases.....					1	26			1.00	26.00
Total.....					3	62			2.36	62.00
GRAND TOTALS.										
Panama Canal employees.....	1	1	6	2 ²	25	191	28.62	25.76	186.94	241.32
Panama Railroad employees.....	1	2	4	5	6	57	8.80	5.39	56.97	71.16
Soldiers.....	5			99			106.54			106.54
Panama pay cases.....		1	7	4	49	238	4.00	47.42	2 ² 8.53	289.95
Other pay cases.....	5	1	3	32	49	74	35.96	40.50	71.97	148.43
Charity cases.....			6	11	1 ²	145	9.46	13.67	14 ² .97	167.10
Total.....	12	5	26	174	142	705	193.38	132.74	698.38	1,024.50

Number of employees remaining in hospitals:

White.....		59
Black.....		248
Total.....		307

TABLE IX.—CONSOLIDATED DISPENSARY REPORT.
EMPLOYEES TREATED IN QUARTERS.

	Remaining June 1.		Admitted.		Died.		Discharged.		Transferred.		Remaining June 30.		Days lost.		
			W.	B.	W.	B.	W.	B.	W.	B.	W.	B.	W.	B.	Total.
Ancon.....	7	0	92	1	0	0	98	1	0	0	1	0	176	2	178
Balboa.....	9	2	185	3	0	0	184	3	2	2	8	0	461	16	477
Pedro Miguel.....	1	0	14	1	0	0	13	1	1	0	1	0	23	12	35
Paraiso.....	3	2	10	10	0	0	11	10	1	2	1	0	65	29	94
Gamboa.....	0	0	1	0	0	0	1	0	0	0	0	0	2	0	2
Gatun.....	0	0	13	4	0	0	12	1	1	1	0	2	27	10	37
Colon.....	8	24	117	246	0	0	118	233	0	0	7	37	277	998	1,275
Total.....	28	28	432	265	0	0	437	249	5	5	18	39	1,031	1,067	2,098

ALL CASES TREATED BUT NOT EXCUSED.

	Employees.			Nonemployees.			Total.		
	W.	B.	Total.	W.	B.	Total.	W.	B.	Total.
Ancon.....	1,923	5,492	7,415	2,013	4,372	6,385	2,936	9,864	13,800
Balboa.....	4,518	4,398	8,916	4,577	1,607	6,184	9,095	6,005	15,100
Pedro Miguel.....	1,479	1,779	3,258	1,199	617	1,816	2,678	2,396	5,074
Paraiso.....	840	2,684	3,524	734	642	1,376	1,574	3,326	4,900
Gamboa.....	68	212	280	14	228	242	82	440	522
Gatun.....	271	1,190	1,461	586	884	1,470	857	2,074	2,931
Colon.....	2,164	6,143	8,307	1,070	1,957	3,027	3,234	8,100	11,334
Total.....	11,263	21,898	33,161	10,193	10,307	20,500	21,456	32,205	53,661

TABLE IX-A.—CONSOLIDATED ADMISSION REPORT.

	White.	Black.	Total.
Total admissions to hospitals, excluding Corozal farm and chronic ward.....	645	464	1,109
Total admissions of employees to quarters.....	432	265	697
Total.....	1,077	729	1,806
Less number of patients transferred between hospitals and from quarters to hospitals, whose admissions are duplicated in above figures.....	17	25	42
Net admissions to hospitals and quarters.....	1,060	704	1,764
EMPLOYEES.			
Employees admitted to hospitals.....	144	259	403
Employees admitted to quarters.....	432	265	697
Total.....	576	524	1,100
Less number of patients transferred between hospitals and from quarters to hospitals, whose admissions are duplicated in above figures.....	5	10	15
Net admissions of employees to hospitals and quarters.....	571	514	1,085
Annual average per thousand of admissions of employees to hospitals and quarters.....	1,391.27	217.75	391.56

TABLE IX-B.—CONTAGIOUS AND INFECTIOUS DISEASES REPORTED DURING THE MONTH.

	Panama.	Colon.	Canal Zone.	Total.
Beriberi.....			1	1
Cancer.....	4			4
Chickenpox.....	6	1	3	10
Diphtheria.....	3	1	1	5
Dysentery.....			2	2
Gonococcus infection.....		19	60	79
Malarial fever.....	22	5	110	137
Measles.....	2		43	45
Meningitis, cerebrospinal, epidemic.....	1			1
Meningitis, tuberculous.....	1			1
Pellagra.....	1			1
Pneumonia, acute.....	18		1	19
Syphilis.....	1		14	15
Tuberculosis.....	32	9	8	49
Whooping cough.....	9		38	47
Yaws.....	1			1

TABLE X.—NUMBER OF EMPLOYEES CONSTANTLY SICK IN HOSPITALS AND QUARTERS.

	White.	Colored.	Total.
Hospitals:			
Ancon Hospital.....	50.00	171.53	221.53
Colon Hospital.....	9.58	18.73	28.31
Total.....	59.58	190.26	249.84
Quarters:			
Ancon.....	5.87	.07	5.94
Balboa.....	15.37	.53	15.90
Pedro Miguel.....	.77	.40	1.17
Paraiso.....	2.16	.97	3.13
Gamboa.....	.03	-----	.03
Gatun.....	.90	.33	1.23
Colon.....	9.33	33.27	42.60
Total.....	34.43	35.57	70.00
	Hos-pitals.	Quar-ters.	Total.
Average number of employees constantly sick:			
White.....	59.58	34.43	94.01
Black.....	190.26	35.57	225.83
Total.....	294.84	70.00	319.84
Average number of employees constantly sick per 1,000:			
White.....	12.09	6.99	19.08
Black.....	6.72	1.25	7.97
Total.....	7.51	2.11	9.62

TABLE XI.—AVERAGE NUMBER OF DAYS IN HOSPITALS OR QUARTERS FOR EACH ADMISSION OF SICK EMPLOYEE.

	White.	Black.	Total.
Hospitals:			
Ancon Hospital.....	12.87	18.87	16.50
Colon Hospital.....	9.28	12.50	11.05
Quarters:			
Ancon.....	2.32	2.00	2.32
Balboa.....	2.8	12.40	2.55
Pedro Miguel.....	1.86	12.00	2.53
Paraiso.....	6.50	2.83	4.58
Gamboa.....	2.00	-----	2.00
Gatun.....	2.07	5.00	2.46
Colon.....	2.71	5.33	4.45

TABLE XII.—FINANCIAL STATEMENT, DEPARTMENT OF HEALTH.

	May, 1917.	April, 1917.	May, 1916.
Administration—General expenses:			
Chief health office.....	\$1,851.81	\$583.16	\$695.35
Construction allotments.....	6,775.61	7,866.59	.....
Stock.....	11,628.74	625.89	.....
Suspense.....	12,930.55	4,662.69	.....
Depreciation.....			823.94
Total.....	4,068.13	4,412.95	1,519.29
Hospital division:			
Ancon Hospital.....	36,153.92	34,191.68	28,869.90
Corozal Hospital and farm.....	8,663.14	7,199.12	5,586.15
Colon Hospital.....	6,222.50	4,629.82	4,494.36
Palo Seco Leper Asylum.....	2,342.52	1,998.07	1,708.31
Santo Tomas Hospital.....	1,233.33	1,110.33	785.83
Medical storehouse.....	1,106.38	855.72	1,762.73
Total.....	55,721.79	49,984.74	43,207.28
Sanitary division:			
Chief sanitary inspector.....	50.00	50.00	50.00
Zone sanitation.....	6,486.88	10,043.15	12,842.30
Health office, Panama.....	3,906.95	4,453.93	3,605.57
Street cleaning, Panama.....	4,632.76	4,680.21	3,909.94
Health office, Colon.....	2,562.42	2,267.88	3,292.49
Street cleaning, Colon.....	2,448.84	2,504.08	1,711.72
Total.....	20,107.85	23,999.25	25,412.02
Dispensaries.....	3,534.89	3,566.87	3,130.58
Quarantine division.....	5,102.91	5,968.09	4,944.08
RECAPITULATION.			
Chief health office.....	4,068.13	4,412.95	1,519.29
Hospital division.....	55,721.79	49,984.74	43,207.28
Sanitary division.....	20,107.85	23,999.25	25,412.02
Dispensaries.....	3,534.89	3,566.87	3,130.58
Quarantine division.....	5,102.91	6,162.38	4,944.08
Total.....	88,535.57	88,126.19	78,213.25

¹ Credit.

TABLE XIII.—ANCON HOSPITAL.
REPORT OF DAYS LOST IN HOSPITAL.

	American.	Foreign.	Black.	Total.
Hospital:				
Panama Canal employees.....	698	468	3,501	4,667
Panama Railroad employees.....	207	127	1,421	1,755
Soldiers.....	2,993	.....	.....	2,993
Panama Government patients.....	.....	.....	12	12
Other pay patients.....	850	983	2,033	3,866
Charity patients.....	130	95	805	1,030
Total.....	4,878	1,673	7,772	14,323
Asylum:				
Panama Canal employees.....	.....	.....	194	194
Panama Railroad employees.....	.....	.....	30	30
Soldiers.....	65	.....	.....	65
Panama Government patients.....	120	1,378	6,054	7,552
Other pay patients.....	30	161	67	258
Charity patients.....	86	285	2,051	2,422
Total.....	301	1,824	8,396	10,521
Chronics.....				
Corozal Farm.....	.....	.....	670	670
Grand total.....	5,179	3,767	18,447	27,393

Cost of subsistence per patient per day, \$0.3569.

WARD LABORATORY REPORT.

Blood examinations (total number).....	773
Estuvooautumnal.....	41
Quartan.....	3
Tertian.....	15
Differential counts.....	8
Hemoglobin estimations.....	264
Leucocyte counts.....	51
Red blood counts.....	6
Stool examinations (total number).....	596
Ameba.....	13
Ascaris lumbroicooides.....	3
Balantidium coli.....	3
Bilharzia.....	1
Ciliated monads.....	2
Entameba (hystolitica and tetragena).....	2
Guaiac tests.....	20
Pus and blood.....	71
Strongloides.....	12
Tenia saginata.....	2
Trichocephalus dispar.....	19
Uncinaria (ova).....	32
Urine examinations (total number).....	2,300
Albumen.....	490
Bile.....	18
Casts.....	238
Epithelia.....	1,146
Guaiac tests.....	165
Hemin crystals.....	9
Indican.....	205
Pus and blood.....	887
Sugar (positive, 7; negative, 681).....	688

TABLE XIII.—ANCON HOSPITAL—Continued.

Sputum examinations (total number).....	436
Positive for tubercle bacilli.....	20
Smear examinations (total number).....	37
Urethral.....	22
Vaginal.....	4
Eye.....	1
Spinal fluid.....	9
Smear from face.....	1

REPORT OF SURGICAL OPERATIONS.

	Number.	Died.
Operations on bones:		
Wiring of fractures, simple.....	2	.....
Adenectomy:		
Cervical.....	2	.....
Inguinal, double.....	1	.....
Femoral.....	7	.....
Herniotomy:		
Inguinal, single.....	9	.....
Inguinal, double.....	2	.....
Ventral.....	2	.....
Genito-urinary tract:		
Nephropexy.....	1	.....
Urethrotomy, external.....	3	.....
Varicocele, radical cure.....	4	.....
Hydrocele, single, radical cure.....	3	.....
Hydrocele, double, radical cure.....	1	.....
Orchidectomy.....	1	.....
Epididymotomy.....	10	.....
Amputation of penis.....	1	.....
Curétage uteri.....	11	.....
Perineoplasty.....	1	.....
Trachelorrhaphy.....	2	.....
Obstetrical:		
Cesarean section, abdominal.....	1	.....
Rectum:		
Hemorrhoids, radical cure.....	1	.....
General:		
Thyroidectomy.....	1	1
Varicose veins, excision of.....	2	.....
Excision of surface neoplasms.....	8	.....
Plastic operation for effects of disease.....	3	.....
Laparotomy:		
For general peritonitis (not traumatic, etc.).....	1	.....
Exploratory.....	1	.....
Gastroenterostomy.....	1	1
Appendectomy.....	10	.....
Panhysterectomy.....	1	.....
Supravaginal hysterectomy.....	6	.....
Hysteromyoamectomy.....	2	.....
Salpingo-oophorectomy.....	2	.....
Ovarian cystectomy.....	1	.....
Oophorectomy.....	1	.....
Suspensio-uteri.....	9	.....
Minor operations, various.....	103	.....
Mayo bunion.....	3	.....
Total.....	220	2

REPORT OF OPERATIONS, EYE AND EAR CLINIC.

Adenoidecomy	5
Adenoidecomy and tonsillectomy.....	11
Chalazion.....	2
Cataract extraction.....	3
Minor nose operations.....	3
Minor mouth operations.....	1
Evisceration.....	1
Pterygium transplantation.....	5
Submucous resection.....	23
Turbinectomy.....	2
Schloral trephine.....	2
Tonsillectomy.....	4
Total.....	62
Refractions.....	69

REPORT OF OUT-PATIENT DEPARTMENT.

Clinic.	Total visits.	New cases.	Pay cases.	Prescriptions.
Medical.....	291	193	26	218
Surgical.....	283	119	11	60
Eye and ear.....	420	170	4	25
Total.....	994	482	41	303

MONTHLY REPORT OF VACCINATION.

Number of adults vaccinated.....	116
Number of "takes".....	66

MONTHLY REPORT OF BOARD OF HEALTH LABORATORY.

Bacteriological examinations of:	
Blood cultures (1 <i>B. coli</i> ; 1 <i>B. typhosus</i>).....	12
Throat cultures (1 <i>B. diphtheria</i>).....	38
Stools (1 <i>B. typhosus</i>).....	23
Uries (5 <i>B. coli</i> ; 1 <i>B. pyocyanous</i>).....	19
Sputum (2 <i>B. tuberculosis</i>).....	4
Spinal fluids (steril).....	2
Blood smears for malaria (negative).....	1
Gonococcus smears (eye, 1 positive; urethral, 1 positive).....	2
Cultures from autopsy of dog.....	1
Leprosy, examination of suspects for (positive, 1; negative, 4).....	5
Dark field examinations (syphilis, 1 negative; yaws, 1 positive).....	2
Chemical examinations of:	
Mother's milk.....	2
Canned milk (Borden's St. Charles brand) for—	
Panama health office.....	2
Colon health office.....	2
Dairy milk from Corozal farm.....	4
Uries.....	7
Flour for Panama health office.....	1
Chloride of lime.....	1
Spinal fluids:	
Butyric acid tests.....	4
Ammonium sulphate tests.....	18
Phenol tests.....	18
Colloidal gold tests.....	18

Pathological tissues prepared; paraffin 304, frozen 4.....	308:
Autopsies performed.....	24
Foetus examined.....	3
Animals autopsied: Hogs (hog cholera, 5), 6; dogs, 2; rabbits, 2; deer, 2; wild hogs (peccary), 2.....	14
Blood films (human, 3; cows, 5).....	8
Tapeworm identified.....	1
Throat smears for Vincent's angina.....	1
Animal tissue films examined: Panama (hogs, 6; steers, 3; goats, 1; rats, 3).....	13
Dogs held for observation.....	1
Hogs held for observation.....	2
Placental films (negative, for malaria).....	25
Rats examined (<i>Mus musculus</i> 1042; <i>Mus norvegicus</i> 305; <i>Mus alexandri-</i> <i>nus</i> 47; <i>Mus ratus</i> , 280).....	1,674
Undertaker:	
Bodies embalmed.....	3
Interments at Corozal.....	15
Shipped to the United States.....	3
Taken to Panama.....	3
Taken to Paraíso.....	1
Cremations.....	18
General:	
Blood tests preliminary for transfusion.....	1
Vaccines prepared, autogenous.....	8
Wassermann reactions.....	1,011
Antityphoid inoculations.....	3
Animal inoculations.....	12
Entomological examination of flour.....	1
Vaccine points manufactured.....	1,084

CORIZAL HOSPITAL.—STATEMENT OF COMMITMENTS, DISCHARGES, AND DEATHS.

COMMITMENTS.

	Male.	Female.
From Canal Zone, first admission.....	8	1
From Panama Government, first admission.....	2	2
Total.....	10	3

DISCHARGES.

	Well.		Improved.		Unimproved.	
	Male.	Female.	Male.	Female.	Male.	Female.
Barbados.....	1	.....	.....	.....	11	.....
Canada.....	.....	.....	.....	.....	21	.....
China.....	.....	.....	1	.....	.....	.....
Jamaica.....	1	.....	.....	.....	.....	.....
Martinique.....	1	.....	.....	.....	.....	.....
Panama.....	.....	.....	.....	1	.....	.....
Scotland.....	1	.....	.....	.....	.....	.....
Sweden.....	1	.....	.....	.....	.....	.....
United States of America.....	1	.....	.....	.....	22	.....
Total.....	4	2	1	1	4	.....

¹ Transferred to Ancon Hospital for surgical treatment.² 1 deportation to Canada; 2 soldiers deported to United States of America.

DEATHS.

Medical diagnosis.	Mental diagnosis.	Male.	Female.
General paralysis of the insane.....	General paralysis of insane.....	1	
Do.....	do.....	1	
Tertiary syphilis; organic heart disease.	Dementia precox.....		1

TABLE XIV.—COLON HOSPITAL.
REPORT OF DAYS LOST IN HOSPITAL.

Class.	Amer-ican.	Foreign.	Black.	Total.
Panama Canal employees.....	161	35	304	500
Panama Railroad employees.....	57	35	258	350
Panama Government pay patients.....		4	10	14
Soldiers.....	115	23		138
Other pay patients.....	199	71	59	329
Charity patients.....	68		13	81
Total.....	600	168	644	1,412

LABORATORY REPORT.

Blood examinations.....	223
Est ivo-autumnal.....	11
Tertian.....	3
White blood counts.....	35
Red blood counts.....	5
Hemoglobin.....	6
Differential counts.....	20
Stool examinations.....	40
Blood.....	6
Strongyloides (embryo).....	8
Urine examinations.....	487
Albumin.....	95
Sugar.....	7
Pus.....	115
Red blood counts.....	15
Casts.....	14
Sputum examinations.....	115
Positive for tubercle bacilli.....	4

SURGICAL OPERATIONS.

Amputations:	
Thigh, double.....	1
Herniotomy:	
Inguinal, single.....	3
Inguinal, double.....	2
Genito-urinary tract:	
Hydrocele, single, radical cure.....	1
Curettage uteri.....	1
Rectum:	
Hemorrhoids, radical cure.....	1
Laparotomy:	
Gastroenterostomy.....	2
Appendectomy.....	4
Appendectomy with general peritonitis.....	1
Salpingo-oophorectomy.....	1
Minor operations, various.....	10
Minor operations, various (dispensary).....	175
Normal deliveries.....	8

TABLE XV.—SANTO TOMAS HOSPITAL.

	Remain-ing June 1.	Admit-ted.	Died.	Dis-charged.	Remain-ing June 30.
Pay patients.....	14	90	4	76	24
Charity patients.....	468	755	97	718	408
Total.....	482	845	101	794	432

Class.	Number treated.	Americans.		Other nations.	
		White.	Black.	White.	Black.
Pay patients.....	104	0	0	37	67
Charity patients.....	1,223	5	0	115	1,108
Total.....	1,327	5	0	152	1,175

Number of days relief furnished patients.....	13,285
Average number of patients constantly sick.....	442
Average number of days treatment for each patient admitted.....	10
Cost of subsistence per patient per day.....	\$0.40

DISPENSARY REPORT.

Class.	White.	Black.	Total.
Natives treated.....	32	664	696
Foreigners.....	59	337	396
Total.....	91	1,001	1,092

DISEASES TREATED.

Malaria.....	20
Measles.....	8
Whooping cough.....	2
Diphtheria and croup.....	2
Influenza.....	16
Dysentery.....	5
Leprosy.....	1
Other epidemic diseases.....	6
Purulent infection and septicemia.....	10
Tetanus.....	1
Tuberculosis of the lungs.....	8
Acute miliary tuberculosis.....	1
Rickets.....	2
Syphilis.....	48
Soft chancre.....	10
Gonococcus infection.....	55
Cancer and other malignant tumors of the skin.....	1
Other tumors.....	1
Acute articular rheumatism.....	3
Diabetes.....	2
Anemia, chlorosis.....	2
Other general diseases.....	1
Alcoholism (acute or chronic).....	11

Other forms of mental alienation	6
Hysteria.....	6
Other diseases of the nervous system.....	2
Follicular conjunctivitis.....	1
Other diseases of the eyes and their annexa.....	17
Organic diseases of the heart.....	14
Diseases of the arteries.....	7
Diseases of the veins.....	2
Diseases of the lymphatic system.....	12
Hemorrhage; other diseases of the circulatory system.....	1
Diseases of the nasal fossae.....	3
Chronic bronchitis.....	19
Pneumonia.....	11
Pleurisy.....	8
Asthma.....	1
Other diseases of the respiratory system.....	1
Diseases of the pharynx.....	8
Diarrhea and enteritis (under 2 years).....	13
Diarrhea and enteritis (2 years and over).....	13
Ankylostomiasis.....	55
Intestinal parasites.....	6
Appendicitis and typhlitis.....	1
Hernias, intestinal obstructions.....	12
Diseases of the anus and fecal fistula.....	2
Other diseases of the intestines.....	6
Cirrhosis of the liver.....	1
Simple peritonitis.....	1
Bright's disease.....	16
Diseases of the urethra.....	6
Non venereal diseases of the male genital organs.....	10
Uterine hemorrhage.....	2
Uterine tumor.....	1
Metritis.....	26
Other diseases of the uterus.....	5
Salpingitis and other diseases of the female genital organs.....	6
Normal labor.....	82
Accidents of pregnancy.....	18
Furuncle.....	2
Acute abscess.....	12
Scabies.....	1
Other diseases of the skin and annexa.....	13
Diseases of the bones.....	3
Other diseases of the organs of locomotion.....	1
Congenital malformation.....	2
Nurslings discharged from the hospital without disease.....	78
Senility.....	1
Other acute poisonings.....	2
Burns.....	3
Traumatism by firearms.....	2
Traumatism by cutting or piercing instruments.....	3
Traumatism by other crushing.....	2
Sprains.....	3
Fractures.....	11
Other external violence.....	13
Diseases not specified or ill defined.....	5
No disease.....	20
Total discharges during month.....	794
Deaths occurring among patients during month.....	101
Patients remaining in hospital at end of month.....	432
Total number of patients treated during the month.....	1,327

SURGICAL OPERATIONS.

Amputation forearm.....	1
Adenectomy, cervical.....	2
Adenectomy, inguinal, single.....	14

Adenectomy, inguinal, double.....	2
Herniotomy, inguinal, single.....	10
Herniotomy, inguinal, double.....	1
Herniotomy, femoral.....	1
Urethrotomy, internal.....	1
Urethrotomy, external.....	4
Hydrocele, single, radical cure.....	1
Amputation of penis.....	1
Curetage uteri.....	10
Perineoplastie.....	1
Vaginal sections.....	2
Circumcisions.....	20
Cesarian section, abdominal.....	1
Hemorrhoids, radical cure.....	1
Fistula in anus, excision of.....	1
Plastic operation for severe injuries.....	1
Skin graft.....	9
Appendectomy.....	7
Abscess of liver, laparo-hepatotomy for.....	1
Abscess of liver, thoraco-hepatotomy for.....	2
Pan hysterectomy.....	3
Supravaginal hysterectomy.....	2
Salpingectomy, single.....	1
Salpingectomy, double.....	2
Salpingo-oophorectomy.....	4
Oophorectomy.....	1
Suspensio-uteri.....	5
Major operations, various other.....	8
Minor operations, various.....	69
Total.....	189

LABORATORY REPORT.

Urine examinations.....	640
Albumen.....	201
Hyaline casts.....	51
Granular casts.....	48
Pus.....	73
Blood.....	15
Epithelium cells.....	23
Phosphates.....	8
Sugar.....	8
Stool examinations.....	882
Uncinariasis.....	145
Strongyloides.....	30
T. dispar.....	17
Ascarides.....	50
Balantidium coli.....	2
Ciliated monads.....	3
Ameba.....	2
Mucus and pus.....	3
Sputum examinations.....	62
Positive for tubercle bacilli.....	20
Blood examinations.....	192
Tertian.....	3
Estivo autumnal.....	7
White blood counts.....	3
Differential counts.....	3
Wassermann reactions.....	155
Positive.....	51
Throat cultures.....	17
Positive.....	2
Smears examined.....	7
Positive.....	2
Widal's reactions.....	3
Surgical tissues examined.....	123
Autopsies performed.....	63

TABLE XVI.—SUMMARY OF SANITARY WORK PERFORMED AND MATERIAL EXPENDED IN THE CANAL ZONE.

Work requests on supply department:	
Grass cutting.....	41
Screening.....	9
Miscellaneous.....	6
Work requests on municipal engineer.....	3
Work requests on other divisions.....	1
Notices served to abate nuisances.....	2
Pit closets inspected.....	695
Buildings inspected:	
For screening.....	988
For mosquitoes.....	2,979
For general sanitation.....	1,696
For safety.....	2
Stores inspected.....	20
Restaurants inspected.....	14
Shops inspected.....	44
Garbage cans emptied.....	3,224
Closets disinfected.....	628
Houses disinfected or fumigated.....	.9
Rat traps in use.....	484
Number of rats destroyed.....	672
Number of mosquitoes destroyed in dwellings:	
Anopheles.....	3,092
Stegomyia.....	24
Culex and mansonia.....	9,868
Material expended:	
Larvacide, gallons.....	287
Crude oil, gallons.....	11,404
Kerosene, gallons.....	504

REPORT OF ROUTINE WORK DONE BY HEALTH OFFICE, PANAMA.

General sanitation:	
Linear feet of ditches cleaned and maintained.....	120,265
Linear feet of new ditches dug.....	0
Number of feet of ditches made permanent during month.....	0
Square feet of vegetation removed.....	528,026
Square yards of pools oiled.....	252,385
Gallons of crude oiled used.....	3,688
Gallons of larvacide used.....	502
Gallons of kerosene used.....	250
Water containers treated.....	10,313
Mosquito breeding places found (Stegomyia 147).....	268
Fly breeding places found.....	82
Flies trapped (13,000 per quart).....	554
Number of rats killed.....	881
Average number of rat traps used daily.....	177
Number of room disinfections made.....	15
Garbage collection:	
Number of loads of garbage removed to dump.....	4,518
Number of cubic yards of garbage removed to dump.....	9,949
Total number of cans of garbage emptied.....	43,986
Buildings:	
Number of buildings inspected.....	4,252
Number of plans for new buildings approved.....	9
Number of permits issued for repairs to old buildings.....	68
Total building permits issued.....	77
Number of buildings condemned.....	3
Number of buildings demolished.....	9
Sewer connections made during month.....	3
Street cleaning:	
Average number of square yards of streets cleaned daily.....	600,000
Average number of square yards of streets sprinkled daily.....	45,000
Number of private properties cleaned during month.....	7
Number of nuisance notices served, and nuisances abated.....	220
Vaccinations:	
Number of vaccinations performed during month.....	200
Total number of vaccinations since Apr. 1, 1914.....	25,395

MONTHLY WORK REPORT FOR COLON-CRISTOBAL-MOUNT HOPE.

Sanitation—Colon-Cristobal:

Square yards street cleaned.....	4,044, 048.
Square yards alleys maintained.....	676, 000
Number of private properties cleaned.....	1, 081
Number of rats caught.....	377
Loads of yard garbage disposed of.....	542
Number of cans garbage (cubic yards, 2,616).....	64, 695
Line yards of ditches maintained.....	200
Acres of vegetation removed, Panama R. R. reservation, Colon-Swamp.....	20
Acres of vegetation removed, Panama R. R. reservation, Cristobal.....	6
Acres of vegetation removed, quarantine grounds.....	3
Acres of vegetation removed, Washington Hotel.....	3
Acres of vegetation removed, wireless station.....	3
Square yards oiled.....	219, 100
Number of receptacles treated.....	67, 780
Number of buildings inspected.....	8, 118
Number of gallons of larvacide used in Colon.....	378. 16.
Number of gallons of crude oil used in Colon.....	2, 100
Number of nuisances abated.....	484

Building—Colon:

Number of building plans approved.....	6
Number of permits to occupy issued.....	5
Number of permits to repair issued.....	40
Number of bills collected.....	110

Sewers—Colon:

Number of new connections made during the month.....	7
Total number of connections made to date.....	1, 432
Number of houses on which additional connections were made.....	3
Outstanding permits.....	50

Sanitation—Cristobal:

Number of cans garbage (cubic yards, 720).....	14, 059
Loads of yard garbage handled.....	245
Square yards oiled.....	10, 130
Number of receptacles treated.....	2, 640
Number of buildings inspected.....	1, 030
Number of nuisances abated.....	37
Number of gallons larvacide used.....	42
Number of gallons crude oil used.....	700
Number of private properties cleaned.....	14

Sanitation—Mount Hope:

Number of cans garbage (cubic yards, 97).....	600
Square yards oiled.....	125, 500
Number of receptacles treated.....	20, 050
Number of mosquitoes' places destroyed.....	253.

Number of mosquitoes caught, (7,624)—

	Culex.	Ano- opheles.
Barracks.....	732	1, 331
Silver M. Q.....	121	682
Cars.....	184	1, 580
Mount Hope village.....	486	1, 841
Mindi.....	82	585
Total	1, 605	6, 019

Gallons of crude oil used.....	2, 666. 66
Gallons of larvacide oil used.....	70
Mount Hope Cemetery maintained.	
Linear yards ditches maintained.....	1, 302
Square yards of vegetation removed.....	181, 710
Number of burials during the month.....	39
<i>Coco Solo:</i>	
Vegetation removed naval base (acres).....	60
Linear yards ditches constructed (cubic yards, 150).....	335

TABLE XVII.—CONSOLIDATED REPORT OF QUARANTINE TRANSACTIONS AT THE PORTS OF BALBOA—PANAMA AND COLON—CRISTOBAL.

Number of vessels inspected and passed.....	211
Number of vessels inspected and detained.....	9
Number of vessels inspected and transiting canal in quarantine.....	10
Total number of vessels entered during the month.....	230
Number of supplementary inspections of detained vessels.....	112
Total number of inspections of vessels during month.....	342
Number of vessels fumigated on arrival.....	11
Number of vessels fumigated prior to departure.....	1
Total number of vessels fumigated.....	12
Number of bills of health issued.....	217
Number of bills of health viséed.....	144
Number of crew inspected and passed.....	12,250
Number of passengers inspected and passed.....	5,016
Number of stowaways found on board incoming vessels.....	5
Total number of persons inspected on arrival.....	17,271
Number of passengers and crew examined at supplementary inspections.....	1,465
Total number inspections during the month.....	18,736
Number of persons vaccinated in port on arrival because of compulsory vaccination law.....	247
Number of persons vaccinated at port of departure or en route.....	323
Total number of vaccinations.....	570
Number of persons detained at quarantine stations to complete period of incubation of yellow fever and bubonic plague.....	295
Number of persons detained on board vessels to complete incubation period.....	1,348
Total number of persons detained in quarantine.....	1,643
Number of persons arriving from foreign ports:	
Cabin.....	838
Steerage.....	2,786
3,624	
Number of persons arriving from coast towns in small launches and sailing craft.....	1,388
Number of persons departing for coast towns in small launches and sailing craft.....	1,257
Number of persons in transit for Pacific ports, not passing through canal.....	182
Number of persons in transit passing through the canal.....	298
Number of persons in transit, not passing through the canal.....	241
Number of immigrants rejected and deported.....	38

IMMIGRATION REPORT FOR THE PORTS OF COLON-CRISTOBAL
AND BALBOA-PANAMA.

From—	Cabin.	Steerage.
United States.....	500	1,287
Europe.....	4	.....
Cuba.....	32	34
Porto Rico.....	111	1,058
Jamaica and West Indies (not shown above).....	31	296
Costa Rica.....	24	5
Bocas del Toro.....	51	199
Central America (not shown above).....	7	1
Colombia.....	76	96
Venezuela.....	12	1
Ecuador.....	18	4
Peru.....	8	2
Chile.....	15	2
Total.....	889	2,985
	3,874	
Men.....		3,188
Women.....		441
Children.....		245
		3,874

QUARANTINE TRANSACTIONS AT THE PORT OF BOCAS DEL TORO,
PANAMA.

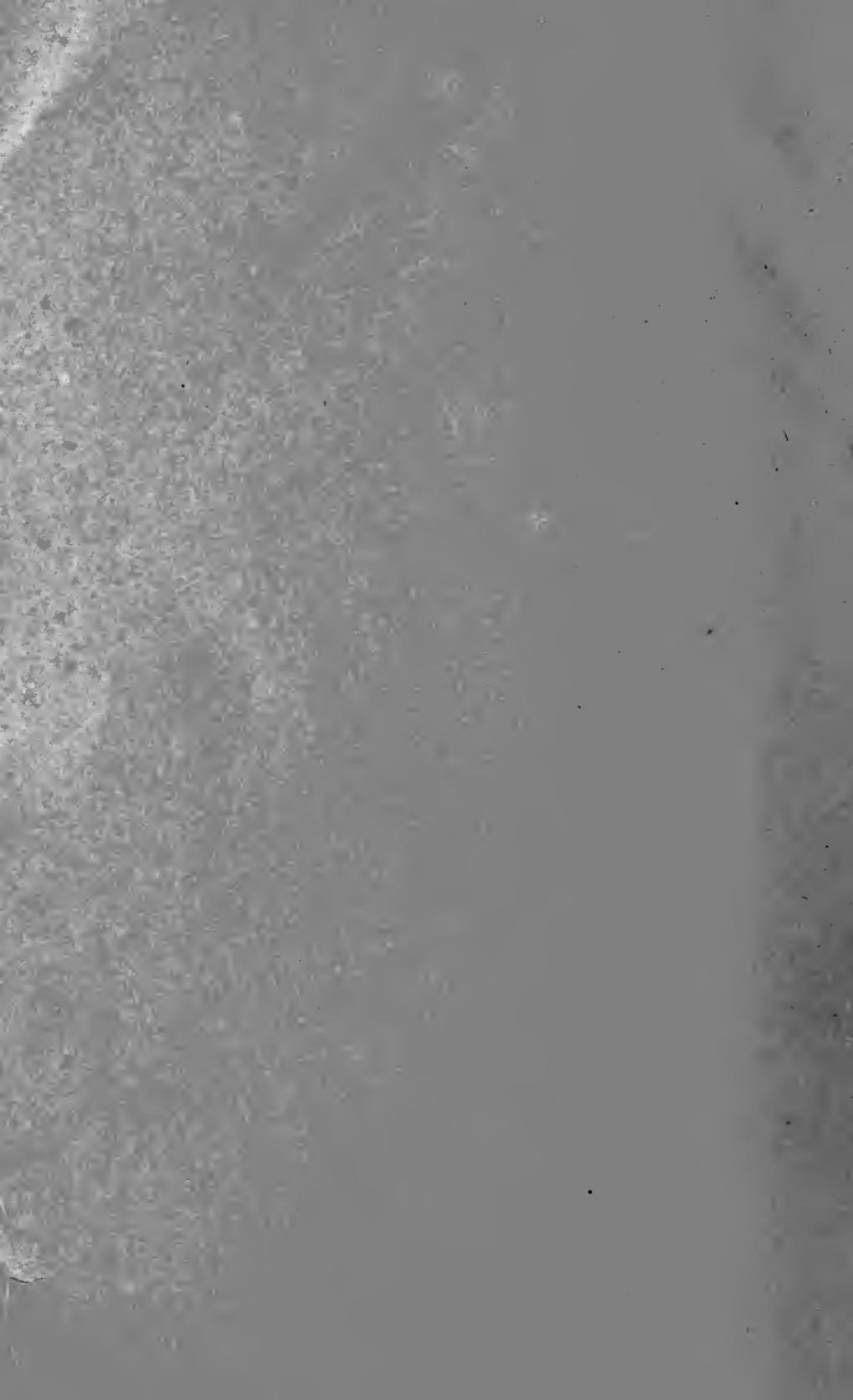
Number of vessels inspected and passed.....	23
Number of crew inspected and passed.....	867
Number of passengers inspected and passed.....	244
Number of passengers, transit, inspected and passed.....	148
Number of persons held in quarantine to complete period of incubation of yellow fever.....	1

No quarantinable disease has appeared in this port, and the health conditions of the port and surrounding territory are good.

TABLE XVIII.—PERSONNEL REPORT.

	June, 1917.			May, 1917.	June, 1916.
	Gold em- ploy- ees.	Silver em- ploy- ees.	Total em- ploy- ees.	Total em- ploy- ees.	Total em- ploy- ees.
Chief health office.....	3	.....	3	4	4
Medical storehouse.....	4	4	8	8	8
Quarantine division.....	13	35	48	47	45
Health office, Panama.....	12	136	148	141	155
Health office, Colon.....	10	169	179	162	181
Ancon Hospital.....	112	214	326	321	359
Colon Hospital.....	17	26	43	43	40
Santo Tomas Hospital.....	7	.....	7	7	6
Palo Seco Leper Asylum.....	2	21	23	31	19
Zone sanitation.....	5	132	137	127	139
Corozal Hospital.....	16	110	126	120	59
Dispensaries:					
Balboa.....	7	3	10	8	7
Pedro Miguel.....	2	2	4	4	3
Paraiso.....	2	2	4	4	4
Gamboa.....	1	1	1	1
Gatun.....	2	2	4	5	4
Total.....	215	856	1,071	1,095	1,034

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